

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph [026] with the following rewritten paragraph:

— [026] FIG. 1 (SEQ ID NOS:1-26) depicts CD8 α -chain protein and nucleic acid sequences from various species. Also included are accession numbers for the noted sequences. —

Please replace the paragraph [027] with the following rewritten paragraph:

— [027] FIGS. 2A-B (SEQ ID NOS:27-30) depict the amino acid and nucleic acid sequences for the wild-type human CD8 α -chain, including a demarcation of the different domains of the protein for human and mouse, respectively. —

Please replace the paragraph [038] with the following rewritten paragraph:

— [038] FIG. 13 depicts Balb/c mice that were immunized with AdLacZ (▲) (■/□) or mAdCD8 (■) (▲/△) lytic activity against AdLacZ-infected syngeneic P815 target cells. —

Please replace the paragraph [073] with the following rewritten paragraph:

— [073] One skilled in the art will also appreciate that immunomodulatory molecules having substantial homology to the afore-mentioned polypeptides may find advantageous use in the invention. Accordingly, for example, also encompassed by “CD8 polypeptides” are homologous polypeptides having at least about 80% sequence identity, usually at least about 85% sequence identity, preferably at least about 90% sequence identity, more preferably at least about 95% sequence identity and most preferably at least about 98% sequence identity with the polypeptide encoded by nucleotides shown in Figure 2 (SEQ ID NOS:27-30). —

Please replace the paragraph [074] with the following rewritten paragraph:

— [074] By “nucleic acid molecules encoding CD8”, and grammatical equivalents thereof is meant the nucleotide sequence of human CD8 as shown in Figure 2 (SEQ ID NOS:27-30) as well as nucleotide sequences having at least about 80% sequence identity, usually at least about 85% sequence identity, preferably at least about 90% sequence identity, more preferably at least

about 95% sequence identity and most preferably at least about 98% sequence identity with nucleotides shown in Figure 2 (SEQ ID NOS:27-30) and which encode a polypeptide having the sequence shown in Figure 2 (SEQ ID NOS:27-30), and as set forth in Figure 1 (SEQ ID NOS:1-26). —

Please replace the paragraph [080] with the following rewritten paragraph:

— [080] The alignment may include the introduction of gaps in the sequences to be aligned. In addition, for sequences which contain either more or fewer amino acids than the amino acid sequence of the polypeptide encoded by nucleotides shown in Figure 2 (SEQ ID NOS:27-30), it is understood that in one embodiment, the percentage of sequence identity will be determined based on the number of identical amino acids in relation to the total number of amino acids. Thus, for example, sequence identity of sequences shorter than that of the polypeptide encoded by nucleotides in Figure 2 (SEQ ID NOS:27-30), as discussed below, will be determined using the number of amino acids in the shorter sequence, in one embodiment. In percent identity calculations relative weight is not assigned to various manifestations of sequence variation, such as, insertions, deletions, substitutions, etc. —

Please replace the paragraph [082] with the following rewritten paragraph

— [082] CD8 having less than 100% sequence identity with the polypeptide encoded by nucleotides in Figure 2 (SEQ ID NOS:27-30) will generally be produced from native CD8 nucleotide sequences from species other than human and variants of native CD8 nucleotide sequences from human or non-human sources. In this regard, it is noted that many techniques are well known in the art and may be routinely employed to produce nucleotide sequence variants of native CD8 sequences and assaying the polypeptide products of those variants for the presence of at least one activity that is normally associated with a native CD8 polypeptide. In a preferred embodiment the CD8 α -chain is from human but as shown in Figure 1 (SEQ ID NOS:1-26), CD8 α -chain from rat, mouse, and primates are known and find use in the invention.

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Please replace the paragraph [083] with the following rewritten paragraph:

— [083] Polypeptides having CD8 activity may be shorter or longer than the polypeptide encoded by nucleotides depicted in Figure 2 (SEQ ID NOS:27-30). Thus, in a preferred embodiment, included within the definition of CD8 polypeptide are portions or fragments of the polypeptide encoded by nucleotides in Figure 2 (SEQ ID NOS:27-30). In one embodiment herein, fragments of the polypeptide encoded by nucleotides in Figure 2 (SEQ ID NOS:27-30) are considered CD8 polypeptides if a) they have at least the indicated sequence identity; and b) preferably have a biological activity of naturally occurring CD8, as described above. —

Please replace the paragraph [084] with the following rewritten paragraph:

— [084] In addition, as is more fully outlined below, CD8 α -chain can be made longer than the polypeptide encoded by nucleotides in Figure 2 (SEQ ID NOS:27-30); for example, by the addition of other fusion sequences, or the elucidation of additional coding and non-coding sequences. —

Please replace the paragraph [085] with the following rewritten paragraph:

— [085] The CD8 polypeptides are preferably recombinant. A “recombinant polypeptide” is a polypeptide made using recombinant techniques, i.e. through the expression of a recombinant nucleic acid as described below. In a preferred embodiment, CD8 of the invention is made through the expression of nucleic acid sequence shown in Figure 2 (SEQ ID NOS:27-30), or fragment thereof. A recombinant polypeptide is distinguished from naturally occurring protein by at least one or more characteristics. For example, the polypeptide may be isolated or purified away from some or all of the proteins and compounds with which it is normally associated in its wild type host, and thus may be substantially pure. For example, an isolated polypeptide is unaccompanied by at least some of the material with which it is normally associated in its natural state, preferably constituting at least about 0.5%, more preferably at least about 5% by weight of the total protein in a given sample. A substantially pure polypeptide comprises at least about 75% by weight of the total polypeptide, with at least about 80% being preferred, and at least about 90% being particularly preferred. The definition includes the production of a CD8 polypeptide from one organism in a different organism or host cell. —

Please replace the paragraph [0193] with the following rewritten paragraph:

— [0193] As control vector expressing the bacterial LacZ gene (β -galactosidase) the Qbiogene provided QBI-Infect+ Viral Particle (Ad5.CMV.LacZ Δ E1/ Δ E3). Mouse CD8 α -chain sequence used. This sequence is similar to the published mouse sequence:

ACTUAL SEQUENCE: MASPLTRFLS LNLLLMGESI
ILGSGEAKPQAPELRIFPKK MDAELGQKVD LVCEVLGSVS QGCSWLFQNS
SSKLPQPTFVVYMASSHNI TWDEKLNSSK LFS AVRDTNN KYVLT LNKF
KENEGYYFCSVISNSVMYFS SVVPVLQKVN STTTKPVLRT PSPVHPTGTS
QPQRPEDCRPRGSVKGTGLD FACDIYIWAP LAGICVAPLL SLIITLIC
YH RSRKRVCKCPRPLVRQEGKP RPSEKIV (SEQ ID NO:31). —

Please replace the paragraph [0194] with the following rewritten paragraph:

— [0194] Human CD8 α -chain sequence used. This sequence has a silent mutation compared to the published human sequence as indicated.

ACTUAL SEQUENCE: MALPVTALLL PLALLLHAAR
PSQFRVSPLDRTWNLGWTVE LKCQVLLSNP TSGCSWLFQP RGAAASPTFL
LYLSQNKPKAAEGLDTQRFS GKRLGDTFVL TLSDFRRENE GYYFCSALSN
SIMYFSHFVPVFLPAKPTTT PAPRPPTPAP TIASQPLSLR PEACRPAAGG
AGNRRRVCKCPRPVVKSGDK PSLARYV (SEQ ID NO:32). —

Please insert the enclosed 31-page text entitled “SEQUENCE LISTING” immediately preceding the claims.